

**What is claimed is:**

1. An error rate control apparatus for use in a communications system which maps a data signal and  
5 a control signal to a physical channel, comprising:  
a control signal error rate computation unit  
computing an error rate of the control signal; and  
a power variable unit transmitting after  
changing transmission power of the control signal  
10 based on a value of the error rate.
2. The apparatus according to claim 1, wherein  
said communications system is a W-CDMA system.
- 15 3. The apparatus according to claim 1, wherein  
said control signal is a TFCI, a PILOT, or a  
TPC in a signal format of a W-CDMA system.
4. The apparatus according to claim 1, wherein  
20 said control signal error rate computation  
unit computes an error rate of the control signal  
based on error detection of the data signal.
5. The apparatus according to claim 4, wherein:  
25 said data signal is a transport channel signal

of a W-CDMA system; and

when a plurality of transport channels are included in a physical frame, the error rate of the control signal is computed based on a number of the transport channels in the physical frame.

6. The apparatus according to claim 4, wherein:

said data signal is a transport channel signal of a W-CDMA system; and

10 when the transport channel is transmitted covering a plurality of physical frames, and when a value of the control signal of each physical frame is inconsistent among the plurality of physical frames, an error rate is computed with the control signal considered to be erroneous.

7. The apparatus according to claim 4, wherein:

said data signal is a transport channel signal of a W-CDMA system; and

20 when the transport channel comprises a plurality of transport blocks, and the plurality of transport channels are all erroneous, an error rate of the control signal is computed with the control signal considered to be erroneous.

8. An error rate control method for use with a communications system which maps a data signal and a control signal to a physical channel, comprising:  
    computing an error rate of the control signal;  
5 and  
    transmitting after changing transmission power of the control signal based on a value of the error rate.
- 10 9. The method according to claim 8, wherein said communications system is a W-CDMA system.
10. The method according to claim 8, wherein said control signal is a TFCI, a PILOT, or a  
15 TPC in a signal format of a W-CDMA system.
11. The method according to claim 8, wherein said control signal error rate computation unit computes an error rate of the control signal  
20 based on error detection of the data signal.
12. The method according to claim 11, wherein:  
    said data signal is a transport channel signal of a W-CDMA system; and  
25 when a plurality of transport channels are

included in a physical frame, the error rate of the control signal is computed based on a number of the transport channels in the physical frame.

5 13. The method according to claim 11, wherein:

said data signal is a transport channel signal of a W-CDMA system; and

when the transport channel is transmitted covering a plurality of physical frames, and when a  
10 value of the control signal of each physical frame is inconsistent among the plurality of physical frames, an error rate is computed with the control signal considered to be erroneous.

15 14. The method according to claim 11, wherein:

said data signal is a transport channel signal of a W-CDMA system; and

when the transport channel comprises a plurality of transport blocks, and the plurality of  
20 transport channels are all erroneous, an error rate of the control signal is computed with the control signal considered to be erroneous.